

### Amendments to the Claims

Claim 1 (Currently Amended) A fiber Bragg grating strain ~~sensor~~, ~~said~~ sensor comprising:  
a strain sensor member having a strain sensing section for receiving stress in a longitudinal direction; and

a fiber Bragg grating fastened to said strain sensor member within ~~the~~ said strain sensing section, said fiber Bragg grating having a first end oriented in the longitudinal direction, a second end oriented in a lateral direction perpendicular to the longitudinal direction, and a fiber axis forming ~~describing~~ one quarter of a circular arc between the first end and the second end.

Claim 2 (Currently Amended) The fiber Bragg grating strain sensor of claim 1, wherein said strain sensor member has a form of a plate of constant thickness, including said ~~the~~ strain sensing section as a central section of said plate, and further including a pair of stress-transmitting appendages joined to longitudinally opposite sides of ~~the~~ said strain sensing section, by which the stress is applied to ~~the~~ said strain sensing section.

Claim 3 (Currently Amended) The fiber Bragg grating strain sensor of claim 2, wherein ~~the~~ said strain sensing section has a constant width in the lateral direction.

Claim 4 (Currently Amended) The fiber Bragg grating strain sensor of claim 3, wherein said stress-transmitting appendages are wider than ~~the~~ said strain sensing section in the lateral direction.

Claim 5 (Currently Amended) The fiber Bragg grating strain sensor of claim 4, wherein said stress-transmitting appendages and ~~the~~ said strain sensing section form an H shape.

Claim 6 (Currently Amended) The fiber Bragg grating strain sensor of claim 2, wherein ~~the~~ said strain sensing section has a tapered shape.

Claim 7 (Currently Amended) The fiber Bragg grating strain sensor of claim 6, wherein said stress-transmitting appendages are at least as wide, in the lateral direction, as the sides of ~~the~~ said strain sensing section to which said stress-transmitting appendages are joined.

Claim 8 (Currently Amended) The fiber Bragg grating strain sensor of claim 7, wherein the width of ~~the~~ said strain sensing section decreases continuously from one of the longitudinally opposite sides to another one of the longitudinally opposite sides.

Claim 9 (Currently Amended) The fiber Bragg grating strain sensor of claim 1, wherein the first end and the second end of said fiber Bragg grating are oriented at right angles with respect to one another.

Claim 10 (Previously Presented) The fiber Bragg grating strain sensor of claim 1, wherein when the stress is received in the longitudinal direction of said fiber Bragg grating strain sensor, the first end of said fiber Bragg grating strain sensor becomes elongating and the second end of said fiber Bragg grating strain sensor becomes compressed.

Claim 11 (Currently Amended) The fiber Bragg grating strain sensor of claim 5, wherein said stress-transmitting appendages each have a width which is greater than a width of ~~the~~ said strain sensing section.

Claim 12 (Currently Amended) The fiber Bragg grating strain sensor of claim 6, wherein one of said stress-transmitting appendages at a wide end of ~~the~~ said strain sensing section has a width ( $w_1$ ) equal to ~~the~~ a width ( $w_L$ ) of ~~this~~ the wide end of ~~the~~ said strain sensing section and the other one of said stress-transmitting appendages at a narrow end of ~~the~~ said strain sensing section has a width ( $w_2$ ) greater than  $w_1$  and  $w_L$ .